

REMARKS

Status of the Claims

(Currently Amended) - Claims 1-3, 8, 12, 14, 16-18, 25, 27-29, 33, 34-36, 39, 45, 50, 52-54, 56, 59, 60, 64-67, 70-75, 77-85, 87-91

(Previously Amended) - Claims 4-7, 10, 19, 26, 31, 42, 43, 46, 63, and 76

(Original) - Claims 11, 13, 20, 47-49

(Canceled) - Claims 9, 15, 21-24, 30, 32, 37, 38, 40, 41, 44, 51, 55, 57, 58, 61, 62, 68, 69, and 86

As a result of the foregoing Amendments, the following claims remain pending in the application: 1-8, 10-14, 16-20, 25-29, 31, 33-36, 39, 42, 43, 45-50, 52-54, 56, 59, 60, 63-67, 70-85, and 87-91.

Claim Rejections Under 35 U.S.C. § 102

The Examiner has rejected claims 1-14, 16-20, 23-36, 39, 42, 43, 45-50, 52-54, 56, 59-67, 70-85, and 87-91 as being anticipated by Amado. It is the Examiner's position Amado discloses a seeker for providing a plurality of evaluated candidates and evaluating them according to evaluation criteria, a filter for selecting a subset of candidates from a plurality of candidates by excluding from the subset of evaluated candidates each candidate that is inferior to other candidates, and a viewer for displaying a subset of evaluated candidates. Applicant has amended claims 1, 18, 36, 54, and 89 to indicate that evaluated candidates are produced from a plurality of candidates that have been evaluated according to a plurality of evaluation criteria.

Applicant has further amended claims 1, 18, 36, 72, and 89 to indicate that the filter compares each candidate to other candidates to exclude candidates according to a plurality of evaluation criteria. Finally, Applicant has amended claims 1, 18, 36, 54, 72, and 89 to indicate that the viewer displays linked scatterplots wherein each axis of the scatterplot represents an evaluation criterion. The amended claims indicate clearly that evaluation criteria are used in the present invention to produce a set of evaluated candidates that meet specified evaluation criteria, to optionally produce a set of filtered candidates by comparing candidates to each other and excluding candidates based on two or more evaluation criteria, and to examine the set of filtered candidates using scatterplots in which each axis of the scatterplot represents an evaluation criterion. In view of Applicant's amended claims, Applicant respectfully traverses the rejections.

It is the Examiner's position the test database of Amado which comprises tests descriptions and associated formulas data table, data items identifiers, and triggers data table relates to a plurality of candidates that have been evaluated according evaluation criteria. The Examiner further states that a library is a database and that if-then-else tests represent selection criteria that may be used to obtain a set of candidates. Applicant's amended claims indicate that evaluated candidates are produced from a plurality of candidates that are evaluated according to evaluation criteria that relate to an aspect or attribute of a candidate. Evaluated candidates are then passed to a filter.

Applicant respectfully submits that Amado teaches if-then-else tests as suggested by the Examiner but does not explain or even suggest how such if-then-else tests may be used to evaluate a plurality of candidates according to evaluation criteria in order to produce a set of evaluated candidates. Evaluating candidates according to

evaluation criteria may be accomplished using design critics. Applicant respectfully submits that various programming constructs may be used to implement a software component to perform candidate evaluation as taught by Applicant. However, knowledge of widely used programming constructs, including Amado's teachings with respect to if-then-else tests, is not sufficient to implement a software component to perform candidate evaluation as taught by Applicant because there is no teaching in the reference related to application of an evaluation criterion (i.e., an aspect or performance attribute of a candidate) in order to produce evaluated candidates. Amado simply teaches selecting items from a database based on various selection criteria. There is no indication that items are evaluated according to evaluation criteria to produce a set of evaluated candidates. Selecting items from a database is not producing evaluated candidates as taught by Applicant. Applicant respectfully submits that Amado fails to teach or even suggest application of an evaluation criterion that relates to an aspect or performance attribute of candidates in order to produce evaluated candidates, and therefore, does not anticipate claims 1, 18, 36, 54, 72, and 89.

With respect to claim 54, it is the Examiner's position Amado provides a plurality of candidates composed using a functional and compositional modeling language and evaluated according to a plurality of evaluation criteria based on Amado's teachings regarding the KADS tool. Applicant has amended claim 54 to indicate that the functional and compositional modeling language of the present invention enables simulations of candidate behaviors or characteristics to answer a plurality of questions in order to evaluate candidates according to a plurality of evaluation criteria. Applicant respectfully submits that the KADS tool of Amado does not teach or even suggest

simulations of candidate behaviors or characteristics to answer questions and therefore, cannot support the present rejections.

It is the Examiner's position that Amado teaches filtering based on a set of if-then-else test rules in which dominance is performed by "if" criteria such that candidates that do not satisfy the "if" considerations are excluded. Applicant respectfully submits that knowledge of widely used programming constructs, including Amado's teachings with respect to if-then-else tests, is not sufficient to implement a software component to perform filtering as taught by Applicant because there is no teaching related to the conditions that are applicable to filtering in which candidates are compared to each other based one two or more evaluation criteria. The following example illustrates the application of a filter to a data set according to the present invention.

Assume data values for a vehicle's top speed and miles per gallon are as shown.

Data Pair	Top Speed	MPG	Excluded Candidates
1	120	10	
2	110	15	X
3	100	25	X
4	105	29	X
5	108	24	X
6	106	30	
7	106	25	X
8	111	24	

A first design candidate dominates a second design candidate if the attributes for every criterion of evaluation (i.e., top speed, MPG) of the first design candidate data values are greater or equal to the data values for every criterion of evaluation of the second design candidate and the data value for at least one criterion of evaluation of the first design candidate is strictly greater than the corresponding data value for the

second design candidate. Application of evaluation criteria results in exclusion of data pairs 2, 3, 4, 5, and 7 from the set of acceptable design candidates. For example, data pair 6 dominates data pair 4 because a top speed of 106 is superior to a top speed of 105 and a MPG of 30 is superior to a MPG of 29. Therefore, data pair 6 dominates data pair 4 on both criterion of evaluation and data pair 4 is excluded from the set of acceptable design candidates.

Filtering according to the present invention is comparison-based and produces a different set of acceptable design candidates. The only candidates that remain in the set are those that represent "trade-offs" such that none of the remaining candidates are superior to the others in every respect. Applicant respectfully submits that the teachings of "if-then-else" tests in Amado do not even suggest comparing each candidate with other candidates according to at least two evaluation criteria in order to exclude candidates. There is no indication in Amado that items are excluded from further consideration (e.g., removed from the database) because they are dominated as explained above. Applicant respectfully submits therefore, that the Amado reference cannot support the present rejections.

It is the Examiner's position a scatterplot is nothing more than multiple values related to a particular entity and that linking is merely including data of plot A on plot B. Applicant has amended claims 1, 18, 36, 54, 72, and 89 to indicate that scatterplots according to the present invention are used to examine filtered candidates and have axes that represent evaluation criteria. Applicant respectfully submits that because the Amado reference does not teach or even suggest producing a set of evaluated candidates and filtering candidates based on evaluation criteria, it also does not teach

or even suggest viewing filtered candidates using scatter plots that have axes representing evaluation criteria. Applicant respectfully submits therefore, that the Amado reference cannot support the present rejections.

Conclusion

Applicant respectfully submits that, in addition to other deficiencies, the Amado reference fails to teach the use of evaluation criteria for producing a set of evaluated candidates, for filtering evaluated candidates by comparing candidates with each other, and for viewing scatterplots of filtered candidates as taught by Applicant and therefore, cannot support the preset rejections. Applicant has amended independent claims 1, 18, 36, 54, 72, and 89 to emphasize the use of evaluation criteria in producing evaluated candidates and filtered candidates and in examining remaining candidates that represent trade-offs. In view of the foregoing claim amendments and accompanying remarks, the Applicant respectfully submits that the present application is properly in condition for allowance. Upon consideration of this response, Applicant respectfully requests that the Examiner contact Applicant's representative by telephone or email to schedule a telephone interview to discuss the present application.

Respectfully submitted,

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